

**Before the
Federal Communications Commission
Washington, D.C. 20554**

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| In the Matter of |) | |
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| Additional Comment Sought |) | PS Docket Nos. 06-229, 07-100, 07-114 |
| Public Safety, Homeland Security, |) | GN Docket Nos. 09-47, 09-51, 09-137 |
| And Cybersecurity Elements of the |) | WT Docket No. 06-150 |
| National Broadband Plan |) | CC Docket No. 94-102 |
| |) | WC Docket No. 05-196 |
| |) | |

To: The Commission

COMMENTS OF HARRIS CORPORATION

This comment is submitted on behalf of Harris Corporation (“Harris”) before the Federal Communications Commission in response to the Commission’s Public Notice¹ seeking comment on public safety, homeland security, and cybersecurity issues as they relate to the development of a National Broadband Plan. When developing the National Broadband Plan the Commission must formulate policies that provide public safety and the nation’s first responders with the same level of opportunity for obtaining nationwide broadband access as the Commission plans to for consumers. The need for access to broadband by all citizens cannot be separated from the need for access to broadband by public safety to protect all citizens. In order to facilitate ubiquitous rural broadband access the Commission should attempt to leverage common denominators between public safety, utilities and unserved and underserved communities. In addition, providing voice and data on a single network should be viewed by the Commission as a long

¹ See Additional Comments Sought on Public Safety, Homeland Security, and Cybersecurity Elements of National Broadband Plan, *National Broadband Plan Public Notice Number 8*, GN Docket Nos. 09-47, 09-51, 09-137, PS Docket Nos. 06-229, 07-100, 07-114, WT Docket No. 06-150; CC Docket No. 94-102, WC Docket No. 05-196, DA 09-2133 (rel. Sept. 28, 2009) (“*NBP Public Notice 8*”).

term, not short term goal. For the foreseeable future dedicated public safety voice networks will remain crucial to public safety communications. Furthermore, the Commission must recognize that the requirements of public safety broadband users are different from the needs of other broadband users. In the National Broadband Plan the Commission must account for those differences.

Harris is an international communications and information technology company serving government and commercial markets in more than 150 countries. Harris has an extensive background in the telecommunications industry. Through the acquisition of Tyco Electronics Wireless Systems Division—formerly known as M/A-COM—Harris Corporation has strengthened its place as a leader in the public safety market. Harris’ new Public Safety and Professional Communications Business Unit has a total of 120 years of experience in communications technology with more than 400 critical communications systems deployed world-wide. Harris is a leading technology developer and manufacturer of mission-critical wireless communications for the public safety communications market. Harris has revolutionized public safety communications through the deployment of end-to-end Internet Protocol (“IP”) based land mobile radio systems for mission critical communications, including IP based 6.25 kHz- equivalent efficient public safety solutions in the 700 MHz band. As a pioneer in the development of IP based networks for private radio and broadband applications, Harris supplies industry-leading brands such as VIDA Broadband™, EDACS®, OpenSky®, NetworkFirst™, and Provoice™. In addition, Harris now offers first responders full-spectrum multiband products for joint public safety operations on the local, state, and federal levels: the Harris Unity XG-100 and RF-1033M. Harris is also an active member of numerous standards

and technical committees including the TR-8 Mobile and Personal Private Radio Committee of the Telecommunications Industry Association.

I. The Commission Should Consider Innovative Approaches to Addressing the Needs of Rural America, Such as Leveraging Common Denominators Between Public Safety, Utilities, and Rural Communities.

In the context of the National Broadband Plan, there are many challenges the Commission faces when determining how to provide broadband access to rural areas of the United States.² Rural communities lack the leverage to attract commercial broadband partners, as well as the resources to deploy broadband. Yet, public safety voice systems strive to provide wireless coverage for mission critical communications in all areas of the country, regardless of population density. First responders need to be able to respond to disasters even in remote areas and have the ability to protect all citizens regardless of where they live. In contrast, population density is generally the primary motivator for whether commercial services deploy broadband in an area.

Like public safety rural utilities must also reach all citizens without regard to their location. Utilities, specifically through the introduction of the Smart Grid and associated applications aimed at monitoring and controlling energy consumption and generation, have a growing need for access to broadband communications technology. With an increased reliance on communications comes an increased need for secure and dedicated mission critical spectrum. In response to this emerging and real need for spectrum, the Utilities Telecom Council (“UTC”) has been lobbying the FCC and NTIA to allocate dedicated spectrum for the use of utilities.³

The UTC believes that the most preferred source for this spectrum is the 1800-1830 MHz band

² See Bringing Broadband to Rural America, In the Matter of a Rural Broadband Strategy, *Report to Congress*, GN Docket No. 09-29, DA 09-2258 (rel. Oct. 19, 2009).

³ See e.g., Comment of the Utilities Telecom Council, In the Matter of A National Broadband Plan for Our Future, GN Docket Nos. 09-51, 09-47, 09-137, pgs. 16-23 (filed Oct. 2, 2009).

(also known as the 1.8 GHz band).⁴ In order to support a smarter utility infrastructure utilities, including rural utilities, will require an expansion of their existing communications infrastructure and access to additional spectrum.

As the Commission examines how to address the unique broadband needs of public safety in the National Broadband Plan, the Commission should also look at how the spectrum needs of public safety in rural areas can be addressed in relation to rural utilities and unserved and underserved rural communities. When it comes to broadband access generally rural communities do not have sufficient leverage and/or funding to obtain the same level of service available to more densely populated communities. Similarly, many utilities may find it challenging and expensive to reach rural communities with Smart Grid applications. Therefore, the Commission should look to identify and leverage the common denominators between these three user groups to provide ubiquitous broadband access in rural areas. Outlined below is how the Commission can leverage these common denominators through the National Broadband Plan to provide rural broadband access to public safety, utilities, and communities.⁵

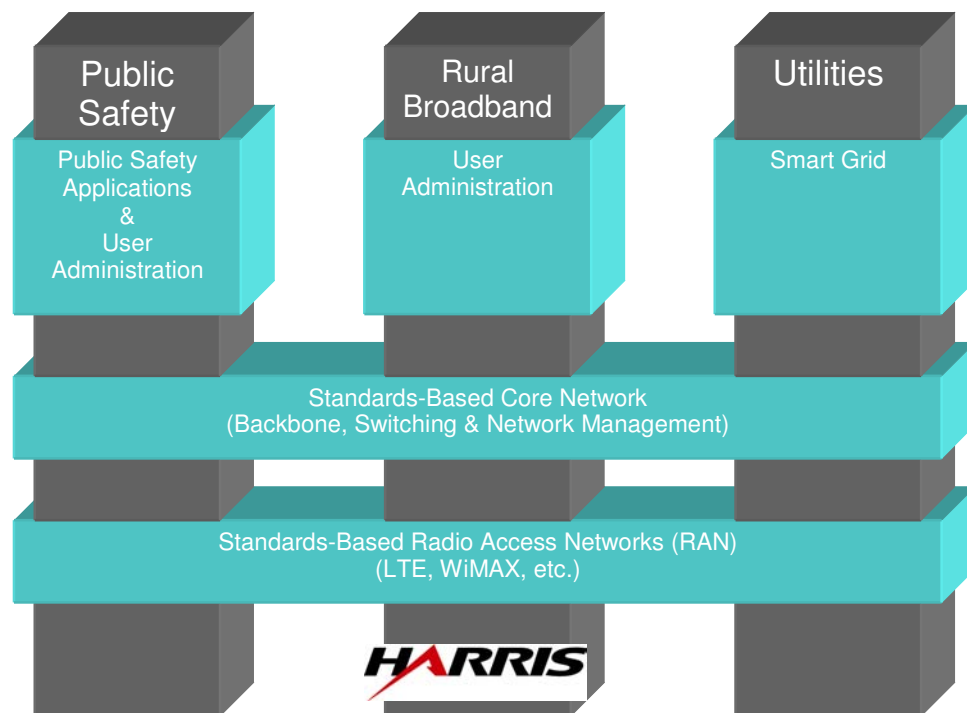
1. To achieve a nationwide public safety broadband capability the Commission must consider taking the following actions:
 - Combine the D and public safety broadband blocks (hereinafter referred to as the “D+PS Block”).
 - Allow for regional build-out.
 - Allow regional optimization of the D+PS Block.

⁴ See Utilities Telecom Council, *The Utility Spectrum Crisis, A Critical Need to Enable Smart Grid*, located at <http://www.utc.org/utc/utility-spectrum-crisis-critical-need-enable-smart-grids> (January 2009).

⁵ Harris previously presented the plan to leverage common denominators, as described within this Comment, to the Commission in an ex parte presentation. See Ex Parte Notice of Harris Corporation, In the Matter of a National Broadband for Our Future; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, GN Docket Nos. 09-51, 09-47, 09-137, PS Docket No. 06-229 and WT Docket No. 06-150 (filed Oct. 19, 2009).

- Leverage existing Regional Planning Committee's framework.
 - Maintain a technology neutrality policy.
 - Require a nation-wide interoperability mode of operation.
2. In parallel, the Commission should consider actions that will create a communications capability that can support a North American electric system including:
 - Facilitating the wireless component of the Smart Grid.
 - Allow utilities access to D+PS Block.
 - Collaborate with NTIA to provide utilities access to 1.8 GHz spectrum.
 3. In order to provide broadband access for all citizens, in rural unserved and underserved communities the Commission should examine:
 - Using unused spectrum in the D+PS Block to provide broadband access in underserved and unserved areas. However, when providing general broadband access the Commission should establish rules to provide priority access for public safety.

The figure below is a graphic depiction of the common denominators approach:



II. Providing Expansive Voice and Data Applications On A Single Network Is a Long Term Technological Goal For Public Safety, But In the Near Term Dedicated Voice Networks Will Remain Critical to the Public Safety Community.⁶

Historically, public safety communications networks have separated voice and data applications and traditional land mobile radio technologies have supported this type of dedicated use. However, with the development of newer technologies for land mobile radios, the concept of shared public/private and voice/data networks has become more feasible. Although it would be ideal for public safety users to have a single nationwide network for mobile broadband data and voice services, such a scenario is not practical in the short term. While some public safety networks currently support both voice and data applications over the same network, such as in the 4.9 GHz and 800 MHz bands, the data that is supported on those networks is generally low capacity text data.

Dedicated mission critical public safety voice networks remain the lifeblood of the public safety community. Currently, public safety relies heavily on commercial networks to provide data services. In many cases commercial networks do not provide the type of requirements needed to support mission critical voice applications. Dedicated voice networks are critical to preserve the integrity of public safety communications and meet the needs of the public safety community. In a White Paper⁷ submitted to the Commission by Harlin McEwen, in his capacity as the Chairman for the International Association of Chiefs of Police, Communications and Technology Committee, he addressed this very issue. In the White Paper McEwen wrote:

⁶ In the National Broadband Plan Public Notice 8 the Commission sought specific comment on “whether public safety users anticipate using a single network for mobile broadband data and voices services in the short or long term, on the obstacles to such convergence, and how the Commission could help address these problems or otherwise support efforts at convergence.” *Id.*, at 2.

⁷ See White Paper of Harlin R. McEwen, Chairman, IACP Communications and Technology Committee, In the Matter of Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, PS Docket No. 06-229 (filed Oct. 12, 2009).

“There is a misconception that broadband can replace mission critical public safety voice systems. There are two major concerns with that belief. First, millions of dollars have already been spent in implementing traditional land mobile public safety voice systems in this spectrum and many more are already planned. To stop that progress would be disastrous to the public safety community and the communities they serve. Secondly, and equally as important, is that the claims that in 2- 3 years broadband will begin replacing land mobile mission critical voice radio services are based on lack of knowledge of the possibilities to accomplish this.”⁸

As part of the National Broadband Plan the Commission must understand the obstacles described by McEwen and recognize that in public safety there will be a continued need for dedicated voice networks for the foreseeable future.

III. The Commission Should Not Limit Itself to One Narrow View of Broadband and Must Take Into Account Unique Needs and Requirements of Public Safety Entities.⁹

The Commission must ensure in the National Broadband Plan that public safety is provided the ability to manage their day-to-day network operations and are not inhibited by other entities riding on the same backbone. The deployment of shared broadband networks nationwide will inevitably create situations in which there are multiple users, with differing priorities, sharing the same broadband backbone. When cell and landline communications are overloaded or go down first responders must be able to use reliable communications to react to a situation. Public Safety broadband networks must be able to be managed in a way that supports the needs and requirements unique to public safety communications.

While the utilization of IP technology, which will facilitate interoperability and long term single network voice and data convergence, enables the use of privatization schemes, the Commission must ensure that public safety entities have the regulatory ability to take action in response to network disruptions quickly and efficiently by utilizing prioritization capabilities.

⁸ *Id.*, at pg. 4.

⁹ See NBP Public Notice 8, *supra* note 2.

Emergencies come in all sizes, from a minor incident in a sparsely populated area to a large scale, regional or national disaster. Therefore, it is important for the Commission to recognize that all broadband users are not created equal, every broadband user, including public safety, has unique needs and requirements when it comes to broadband access.¹⁰ In developing the National Broadband Plan the Commission must provide public safety the flexibility to manage and prioritize data on a shared network or private network.

IV. Conclusion.

The complete nationwide deployment of broadband is one of the most difficult challenges the United States faces today. It is crucial that the Commission helps to facilitate nationwide broadband access to the public safety community. To promote broadband access in rural America the National Broadband Plan should seek to leverage common denominators between public safety, utilities, and unserved and underserved rural communities by allowing these three user groups broadband access on the D+PS network on a non-interfering basis. Furthermore, the Commission must recognize that providing voice and data applications on a single network is a long term technological goal for public safety. The Commission must also provide public safety the flexibility to manage and prioritize data on both private and shared networks. Harris stands ready to work with the Commission, public safety, utilities, and other interested parties to provide innovative ideas to effectively deploy broadband and provide broadband access throughout the country.

¹⁰ See *e.g.*, Comments of the Telecommunications Industry Association, In the Matter of A National Broadband Plan for Our Future, GN Docket No. 09-51, pgs. 3-7 (filed Oct. 2, 2009) (describing how different broadband users have different broadband needs and requirements for their applications).

Respectfully submitted,

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